



## 中华人民共和国国家知识产权局

05905

200233 上海桂平路 435 号 上海专利商标事务所有限公司 徐迅	发文日 
申请号: 2004800145700 	
申请人: 高砂香料工业株式会社	
发明名称: 新鲜茶叶粉末及从新鲜茶叶粉末中获得的加工产品、提取物、油料和芳香物	

## 第 2 次审查意见通知书

1.  审查员已收到申请人于 2008 年 5 月 22 日提交的意见陈述书, 在此基础上审查员对上述专利申请继续进行实质审查。

根据国家知识产权局专利复审委员会于 年 月 日作出的复审决定, 审查员对上述专利申请继续实质审查。

2. 申请人于 年 月 日提交的修改文件, 不符合专利法实施细则第 51 条第 3 款的规定。  
 3. 继续审查是针对下述申请文件进行的:  
 上述意见陈述书中所附的经修改的申请文件。  
 前次审查意见通知书所针对的申请文件以及上述意见陈述书中所附的经修改的申请文件替换页。  
 前次审查意见通知书所针对的申请文件。  
 上述复审决定所确定的申请文件。

4.  本通知书未引用新的对比文件。

本通知书引用下述对比文件(其编号续前, 并在今后的审查过程中继续沿用):

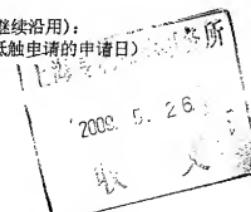
编号 文件号或名称 公开日期(或抵触申请的申请日)  
2 CN1217886A 1999-6-2

## 5. 审查的结论性意见:

- 关于说明书:  
 申请的内容属于专利法第 5 条规定的不授予专利权的范围。  
 说明书不符合专利法第 26 条第 3 款的规定。  
 说明书的修改不符合专利法第 33 条的规定。  
 说明书的撰写不符合专利法实施细则第 18 条的规定。

## 6. 关于权利要求书:

- 权利要求 不具备专利法第 22 条第 2 款规定的新颖性。  
 权利要求 1-15 不具备专利法第 22 条第 3 款规定的创造性。  
 权利要求 不具备专利法第 22 条第 4 款规定的实用性。  
 权利要求 属于专利法第 25 条规定的不授予专利权的范围。  
 权利要求 不符合专利法第 26 条第 4 款的规定。  
 权利要求 不符合专利法第 31 条第 1 款的规定。  
 权利要求 的修改不符合专利法第 33 条的规定。  
 权利要求 不符合专利法实施细则第 2 条第 1 款的规定。  
 权利要求 不符合专利法实施细则第 13 条第 1 款的规定。



申请号 2004800145700

- 权利要求 \_\_\_\_\_ 不符合专利法实施细则第 20 条的规定。  
 权利要求 \_\_\_\_\_ 不符合专利法实施细则第 21 条的规定。  
 权利要求 \_\_\_\_\_ 不符合专利法实施细则第 22 条的规定。  
 权利要求 \_\_\_\_\_ 不符合专利法实施细则第 23 条的规定。

- 分案的申请不符合专利法实施细则第 43 条第 1 款的规定。

上述结论性意见的具体分析见本通知书的正文部分。

6. 基于上述结论性意见, 审查员认为:

- 申请人应按照通知书正文部分提出的要求, 对申请文件进行修改。  
 申请人在意见陈述书中论述其专利申请可以被授予专利权的理由, 并对通知书正文部分中指出的不符合规定之处进行修改, 否则将不能授予专利权。  
 专利申请中没有可以被授予专利权的实质性内容, 如果申请人没有陈述理由或者陈述理由不充分, 其申请将被驳回。

7. 申请人应注意下述事项:

- (1) 根据专利法第 37 条的规定, 申请人应在收到本通知书之日起的 贰 个月内陈述意见, 如果申请人无正当理由逾期不答复, 其申请将被视为撤回。  
(2) 申请人对其申请的修改应符合专利法第 33 条和实施细则第 51 条的规定, 修改文本应一式两份, 其格式应符合审查指南的有关规定。  
(3) 申请人的意见陈述书和/或修改文本应邮寄或递交国家知识产权局专利局受理处, 凡未邮寄或递交给受理处的文件不具备法律效力。  
(4) 未经预约, 申请人和/或代理人不得前来国家知识产权局专利局与审查员举行会晤。

8. 本通知书正文部分共有 3 页, 并附有下述附件:

- 引用的对比文件的复印件共 1 份 15 页。

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## 第二次审查意见通知书正文

申请号：2004800145700

申请人于2008年5月22日提交了意见陈述书和经过修改的申请文件，审查员在仔细阅读了上述文件后，继续对本申请进行了审查，再次提出如下审查意见：

1、对比文件2（CN1217886A）中公开了一种将茶叶粉碎成粉浆制成的茶精，并公开了其可以加入牛奶、糖、酒、果汁等同饮（参见说明书第1页第20-27行），则其实质上公开了经过处理的水果产品，其是通过用茶粉处理由水果制成的果汁而制得的。因此，权利要求1与对比文件1相比的不同在于：1) 茶粉是由茶叶的新鲜叶片直接冷冻干燥、粉碎制得的；2) 是直接用茶粉处理水果等。则其所解决的技术问题是：提供一种用冷冻干燥得到的茶粉直接处理的产品。但是，1) 对比文件1（JP11-346702A）中公开了一种加工茶叶鲜叶的方法，可以为将茶叶鲜叶经过洗净、冻结等预处理之后采用真空冷冻干燥法将其干燥，并公开了可以将其粉碎（参见权利要求1-4，说明书第3页〔0013〕至〔0017〕，实施例），则也可以得到一种茶叶粉末，虽然其中茶叶经过了一些前处理，但是是否经过洗净、冻结等前处理工序显然是本领域技术人员可以根据实际的情况（如茶叶鲜叶的情况、最终产品的需求等）作出的一般性选择，其所能带来的技术效果也是本领域技术人员可以预见的；2) 果汁本身就是由水果制备而成的，其营养成分、风味等均较为类似，则本领域技术人员根据用茶粉来处理果汁可以容易地想到该茶粉也可以来处理果实本身，即选择用茶粉处理果实等也是本领域技术人员可以作出的一般性选择。因此本领域技术人员在对比文件2的基础上结合对比文件1并作出一般性选择就可以得出权利要求1请求保护的技术方案。故权利要求1不具备专利法第22条第3款中规定的创造性。

2、权利要求2进一步限定茶科植物的新鲜叶片和/或茎是茶科植物的一番茶和/或二番茶的新鲜叶片和/或茎。虽然对比文件中没有公开上述内容，但是一番茶和/或二番茶的新鲜叶片和/或茎是制备茶叶产品的常用原料，其中显然是含有较多茶的营养成分和/或风味成分的，则选择其仅仅是本领域技术人员可以作出的一般性选择，能带来的技术效果也是显而易见的。因此，该权利要求在其引用的权利要求不具备创造性的情况下，也不具备专利法第22条第3款中规定的创造性。

3、权利要求3进一步限定冷冻干燥前要遮光放置。虽然对比文件中没有公开上述内容，但是新鲜茶叶采摘后在遮光条件下放置是本领域的常见技术手段，其能够带来的技术效果也是可以预见的。故该权利要求在其引用的权利要求不具备创造性的情况下，也不具备专利法第22条第3款中规定的创造性。

4、对比文件2（CN1217886A）中公开了一种将茶叶粉碎成粉浆制成的茶精，并公开了其可以加入牛奶、糖、酒、果汁等同饮（参见说明书第1页第20-27行），则其实质上公开了经过处理的水果浆液，其是通过用茶粉处理由水果制成的果汁（即浆液）

而制得的。因此，权利要求1与对比文件1相比的不同在于：1) 茶粉是由茶叶的新鲜叶片直接冷冻干燥、粉碎制得的。则其所解决的技术问题是：提供一种由冷冻干燥的茶粉处理过的果实等食品产品的提取物或浆液。但是，1) 对比文件1 (JP11-346702A) 中公开了一种加工茶叶鲜叶的方法，可以为将茶叶鲜叶经过洗净、冻结等预处理之后采用真空冷冻干燥法将其干燥，并公开了可以将其粉碎（参见权利要求1-4，说明书第3页 [0013] 至 [0017]，实施例），则也可以得到一种茶叶粉末，虽然其中茶叶经过了一些前处理，但是是否经过洗净、冻结等前处理工序显然是本领域技术人员可以根据实际的情况（如茶叶鲜叶的情况、最终产品的需求等）作出的一般性选择，其所能带来的技术效果也是本领域技术人员可以预见的。因此本领域技术人员在对比文件2的基础上结合对比文件1并作出一般性选择就可以得出权利要求4请求保护的技术方案。故权利要求4不具备专利法第22条第3款中规定的创造性。

5、权利要求5-6均引用权利要求4作出了进一步限定，但是其进一步限定的技术特征均是本领域技术人员可以作出的一般性选择，也不会带来意想不到的技术效果（理由参见上文2-3）。故权利要求5-6也具备专利法第22条第3款中规定的创造性。

6、权利要求7请求保护权利要求1-3中的产品制得的提取物。如上所述，权利要求1-3中的产品是本领域技术人员结合对比文件2和1，并作出一般性选择就可以得到的，而将茶、蔬菜、水果等产品制成提取物也是本领域的常见工艺，其所能带来的技术效果也是可以预见的，故再将权利要求1-3中的产品制成提取物是本领域技术人员可以作出的一般性选择。故权利要求7也具备专利法第22条第3款中规定的创造性。

7、权利要求8请求保护从权利要求4-7中的产品收集到的芳香物。同样，权利要求4-7中的产品是本领域技术人员结合对比文件2和1，并作出一般性选择就可以得到的，而从茶、蔬菜、水果等具有芳香的产品中收集芳香物也是本领域的常见工艺，其所能带来的技术效果也是可以预见的，故从权利要求4-7中的产品中收集芳香物也是本领域技术人员可以作出的一般性选择。故权利要求8也具备专利法第22条第3款中规定的创造性。

8、对比文件2 (CN1217886A) 中公开了一种将茶叶粉碎成粉浆制成的茶精，并公开了其可以加入牛奶、糖、酒、果汁等同饮（参见说明书第1页第20-27行），则其实质上公开了一种用茶粉处理的水果产品的方法，即用茶粉处理由水果制成的果汁（即浆液）。因此，权利要求1与对比文件1相比的不同在于：1) 茶粉是由茶叶的新鲜叶片直接冷冻干燥、粉碎制得的；2) 是用茶粉直接处理水果等产品。则其所解决的技术问题是：提供一种用冷冻干燥的茶粉处理水果等产品的方法。但是，1) 对比文件1 (JP11-346702A) 中公开了一种加工茶叶鲜叶的方法，可以为将茶叶鲜叶经过洗净、冻结等预处理之后采用真空冷冻干燥法将其干燥，并公开了可以将其粉碎（参见权利要求1-4，说明书第3页 [0013] 至 [0017]，实施例），则也可以得到一种茶叶粉

末，虽然其中茶叶经过了一些前处理，但是是否经过洗净、冻结等前处理工序显然是本领域技术人员可以根据实际的情况（如茶叶鲜叶的情况、最终产品的需求等）作出的一般性选择，其所能带来的技术效果也是本领域技术人员可以预见的；2) 果汁等果实产品也果实本身的营养成分、风味等均较为类似的，本领域技术人员根据茶粉可以处理果汁显然可以容易地想到茶粉也可以直接处理果实等产品。因此本领域技术人员在对比文件2的基础上结合对比文件1并作出一般性选择就可以得出权利要求4请求保护的技术方案。故权利要求4不具备专利法第22条第3款中规定的创造性。

9、权利要求10-11均引用权利要求9作出了进一步限定，但是其进一步限定的技术特征均是本领域技术人员可以作出的一般性选择，也不会带来意想不到的技术效果（理由参见上文2-3）。故权利要求10-11也具备专利法第22条第3款中规定的创造性。

10、权利要求12-13请求保护食品或饮料。但是，权利要求4-7都不具备创造性，而将提取物或芳香物加入到食品或饮料中对于本领域技术人员来说是显而易见的。故权利要求12-13也不具备专利法第22条第3款中规定的创造性。

11、权利要求14-15请求保护一种化妆品。但是权利要求4-7都不具备创造性，而将提取物或芳香物加入到化妆品中显然也是显而易见的。故权利要求14-15也不具备专利法第22条第3款中规定的创造性。

基于上述理由，本申请不能被授予专利权。如果申请人不能提出本申请具备创造性的充分理由和有利证据，本申请将被驳回。

审查员：叶青

代码：4811

**THE PATENT OFFICE OF THE STATE INTELLECTUAL PROPERTY OFFICE  
OF THE PEOPLE'S REPUBLIC OF CHINA**

Address: No.6 Xi Tucheng Lu, Jimeng Qiao Haidian District, Beijing Post code: 100088 P.O.BOX:Beijing 8020

Shanghai Patent & Trademark Law Office	Examiner	
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Application No.:	Department:	Date of Dispatch
200480014570.0		May 22, 2009
Applicant: TAKASAGO INTERNATIONAL CORPORATION		
Title: FRESH TEA LEAF POWDER AND PROCESSED PRODUCT, EXTRACT, OIL AND AROMA OBTAINABLE FROM FRESH TEA LEAF ...		

**THE SECOND OFFICE ACTION**

1.  The Examiner has received the observations delivered by the applicant on 2008.05.22 in response to the \_\_\_\_\_ Office Action issued by the Patent Office, on the basis of which the Examiner has continued to proceed with the examination as to substance on the above application for patent for invention.  
 Based on the Decision on Reexamination made by the Reexamination Board of the Patent Office on \_\_\_\_\_, the Examiner has continued to proceed with the examination as to substance on the above application for patent for invention.
2.  The amended documents submitted on \_\_\_\_\_ by the Applicant do not conform with Item 3, Rule 51 of the Implementing Regulations, and can not be accepted; the applicant shall submit the amended documents that are in accord with the requirement(s) within one month from the receipt of this Notice, or it will be deemed that the Notice has not been responded to, and the application will be deemed to have been withdrawn.
3. The continued examination is directed at the following application documents:  
 The amended application documents attached to the above observations.  
 The application documents as pointed out by the last Office Action and the replacement sheets of the amended application documents attached in the above observations.  
 The application documents as pointed out by the last Notice on Office Action.  
 The application documents ascertained by the above Decision on Reexamination.
4.  This Notice has not cited any new comparison documents.  
 This Notice has cited the following comparison material (The respective serial number(s) shall be used in the examination procedure(s) hereafter):

No.	Number/Title of Literature	Date of Publication (or the filing date of the conflicting Application)
2	CN1217886A	1999-6-2

5. The conclusive opinions drawn from the examination:

**As regards the Specification:**

- The contents of the application fall under the scope stipulated by Article 5 of the Patent Law for which no patent right should be granted.
- The specification does not conform with the provision of Item 3, Article 26 of the Patent Law.
- The amendment of the specification does not conform with the provision of Article 33 of the Patent Law.
- The drafting of the specification does not conform with the provision of Rule 18 of the Implementing Regulations.
- 

**As regards the Claims:**

- Claim \_\_\_\_\_ does not possess the novelty as stipulated in Item 2, Article 22 of the Patent Law.
- Claim 1-15 does not possess the inventiveness as stipulated in Item 3, Article 22 of the Patent Law.
- Claim \_\_\_\_\_ does not possess the practical applicability as stipulated in Item 4, Article 22 of the Patent Law.
- Claim \_\_\_\_\_ falls under the scope of Article 25 of the Patent Law where no patent right is to be granted.
- Claim \_\_\_\_\_ does not conform with the provision of Item 4, Article 26 of the Patent Law.
- Claim \_\_\_\_\_ does not conform with the provision of Item 1, Article 31 of the Patent Law.
- The amendment of the Claim \_\_\_\_\_ does not conform with the provision of Article 33 of the Patent Law.
- Claim \_\_\_\_\_ does not conform with the definition on invention as stipulated in Item 1, Article 2 of the Implementing Regulations.
- Claim \_\_\_\_\_ does not conform with the provision of Item 1, Rule 13 of the Implementing Regulations.
- Claim \_\_\_\_\_ does not conform with the provisions of Rule 20 of the Implementing Regulations.
- Claim \_\_\_\_\_ does not conform with the provisions of Rule 21 of the Implementing Regulations.
- Claim \_\_\_\_\_ does not conform with the provisions of Rule 22 of the Implementing Regulations.
- Claim \_\_\_\_\_ does not conform with the provisions of Rule 23 of the Implementing Regulations.
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Refer to the text of this Notice for the specific analyses of the conclusive opinion.

6. Based on the above conclusive opinion, the Examiner deems that:

- The applicant shall amend the application documents in accordance with the requirements raised in the text of the Notice.
- The applicant shall discuss in his observations reasons why this application for patent can be granted a patent right, and amend the portions indicated in the text of the Notice which have been deemed as not conforming with the provisions, Otherwise said application will be rejected.
- There is no substantive contents in the application for patent which can be granted a patent right. If

the applicant does not have sufficient reasons to enable it to be granted a patent right, said application will be rejected.

7. The applicant is asked to note the following items:

- (1) According to the provision of Article 37 of the Patent Law, the applicant shall submit his observations within two months from the receipt of this Notice. Where, without justified reasons, the applicant does not respond at the expiration of said date, the application shall be deemed to have been withdrawn
  - (2) The amendments of the application shall be made in conformity with the provisions of Article 33 of the Patent Law and Rule 51 of the Implementing Regulations
  - (3) The Observations and/or amended documents of the applicant's shall be mailed or delivered to the Department of Receipt of the Patent Office. These documents shall have no legal effects if they are not mailed or delivered to the Department of Receipt
  - (4) Without first making an appointment, the applicant and/or his agent can not go to the Patent Office to have an interview with the Examiner
8. The text of this Notice totals 2 page(s), including the following attachments:
- duplicate copy(ies) of cited comparison document(s), altogether 1 copy(ies) 15 pages.

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## SECOND OFFICE ACTION

Application Number: 200480014570.0

5        The applicant submitted the Response to the First Office Action and amended text on May 22, 2008. After examining, the Examiner gives the following remarks:

1. Comparison Document 2 (CN1217886A, hereinafter referred to as D2) discloses a tea extract produced by pulverizing tea leaf into fine slurry and discloses  
10      that said tea extract can be added into milk, sugar, alcohol, fruit juice and so on for drink (cf. lines 20-27 on page 1 of D2). What actually disclosed in D2 is a treated fruit product, which is produced by treating fruit juice from fruit with tea powder.

The differences between Claim 1 and D2 are as follows: 1) the tea leaf powder of Claim 1 is obtained by directly freezing-drying and subsequent milling a fresh tea leaf; 15      and 2) fruits and so on are directly treated with said tea leaf powder.

The technical problem to be solved by Claim 1 is to provide a product directly treated with tea leaf powder produced by freezing-drying. However:

1) Comparison Document 1 (JP11-346702A, hereinafter referred to as D1) discloses a method for processing raw tea leaves, which may comprise the steps of  
20      preprocessing the raw tea leaves by pretreatment, such as washing and freezing before drying the leaves through vacuum freeze-drying treatment. D1 also discloses milling the same (See Claims 1-4, Paras. [0013]-[0017] on Page 3 of the Specification, and the Example portion) to obtain a tea leaf powder.

The tea leaf in D1 undergoes some pretreatment. However, the skilled in the art,  
25      based on the actual conditions (such as the conditions of the fresh tea leaf and the requirement of the final products), can make common selections of whether to carry out the pretreatment steps (such as washing and freezing) or not. Moreover, the technical effects of these selections can also be predicted by the skilled in the art

30      2) Fruit juice is made of fruit, and the flavor and nutritional ingredients thereof are quite similar. Based on the disclosure of treating fruit juice with tea extract, it is easy for the skilled in the art to think of treating fruits with tea powders. In other

words, treating fruit with tea powder is a common selection that can be made by the skilled in the art.

Therefore, based on D2 and combined with D1, it is obvious for the skilled in the art to obtain the technical solution of Claim 1 via common selections. Claim 1  
5 possesses no inventive step under Article 22.3 of the Chinese Patent Law.

2. Claim 2 further defines said fresh leaf and/or stem of tea plant is a fresh leaf and/or a stem of first harvested tea and/or second harvested tea of tea plant. Comparison Documents do not disclose such a technical feature.

10 However, fresh leaf and/or a stem of first harvested tea and/or second harvested tea of tea plant are conventionally used raw materials in the preparation of tea leaf products, and contain more nutritional ingredients and/or flavor ingredients of tea.

Therefore, such a selection is a common selection for the skilled in the art and the technical effects thereof are obvious.

15 When Claim 1 referred to by Claim 2 involves no inventive step under Article 22.3 of the Chinese Patent Law, neither does Claim 2.

3. Claim 3 further defines keeping the fresh tea leaf powder under shade conditions before freezing-drying the same. Comparison Documents do not disclose  
20 such a technical feature.

However, keeping the tea leaf under shade conditions after collection is a conventional technical means in the art and the technical effect thereof is predictable.

When the claims referred to by Claim 3 involve no inventive step under Article  
22.3 of the Chinese Patent Law, neither does Claim 3.

25 4. D2 discloses a tea extract produced by pulverizing tea leaf into fine slurry and discloses that said tea extract can be added into milk, sugar, alcohol, and fruit juice and so on for drink (cf. lines 20-27 on page 1 of D2). Actually, D2 discloses a treated fruit slurry which is produced by treating the fruit juice from fruit (i.e., slurry) by tea  
30 powder.

The difference between Claim 4 and D1 is 1) the tea leaf powder of Claim 4 is

obtained by directly freezing-drying and subsequent milling a fresh tea leaf. The technical problem to be solved by Claim 4 is to provide an extract or slurry of food products (such as fruit) by treating with a tea leaf powder produced by freezing-drying.

5 D1 (JP11-346702A) discloses a method for processing raw tea leaves, which may comprise the steps of preprocessing the raw tea leaves by washing, freezing and so on before drying the leaves through vacuum freeze-drying treatment. D1 also discloses milling the same (See Claims 1-4, Paras. [0013]-[0017] on Page 3 of the Specification, and the Example portion) to obtain a tea leaf powder.

10 The tea leaf in D1 undergoes some pretreatment. However, the skilled in the art, based on the actual conditions (such as the conditions of the fresh tea leaf and the requirement of the final products), can make common selections of whether to carry out the pretreatment steps (such as washing and freezing) or not. Moreover, the technical effects of these selections can also be predicted by the skilled in the art.

15 Therefore, based on D2 and combined with D1, it is obvious for the skilled in the art to obtain the technical solution of Claim 4 via common selections. Claim 4 possesses no inventive step under Article 22.3 of the Chinese Patent Law.

20 5. Claims 5-6 referring to Claim 4 make further definitions. However, the additional technical features of Claims 5-6 are common selections for the skilled in the art and can not bring about any unexpected technical effects (see the reasons in Remarks 2-3).

Therefore, Claims 5-6 possess no inventive step under Article 22.3 of the Chinese Patent Law.

25

6. Claim 7 seeks for the protection of the extracts prepared from the products as claimed in any one of Claims 1-3.

As mentioned above, based on D2 and combined with D1, it is obvious for the skilled in the art to obtain the products of Claims 1-3 via common selections.

30 Moreover, preparing the products such as tea, vegetable and fruit into extracts is a conventional technical means in the art and the technical effect thereof is predictable.

Therefore, producing extracts prepared from the products of Claims 1-3 is a common selection of the skilled in the art.

Consequently, Claim 7 involves no inventive step under Article 22.3 of the Chinese Patent Law.

5

7. Claim 8 seeks for the protection of aromas collected the products of any one of Claims 4-7.

For the same reasons, based on D2 and combined with D1, it is obvious for the skilled in the art to obtain the products of Claims 4-7 via common selections.

10 Moreover, collecting aromas from the products having aroma such as tea, vegetable and fruit is a conventional technical means in the art and the technical effect thereof is predictable. Therefore, collecting aromas from the products of Claims 4-7 is a common selection of the skilled in the art.

Consequently, Claim 8 involves no inventive step under Article 22.3 of the  
15 Chinese Patent Law.

8. D2 (CN1217886A) discloses a tea extract produced by pulverizing tea leaf into fine slurry and discloses that said tea extract can be added into milk, sugar, alcohol, fruit juice and so on for drink (cf. lines 20-27 on page 1 of D2). Actually, D2  
20 discloses a method for treating fruit products with tea powder. In other words, D2 discloses treating the fruit juice from fruit (i.e., slurry) by tea powder.

The differences between Claim 9 and D2 are as follows: 1) the tea leaf powder of  
Claim 1 is obtained by directly freezing-drying and subsequent milling a fresh tea leaf;  
and 2) products such as fruits are directly treated with said tea leaf powder. The  
25 technical problem to be solved by Claim 9 is to provide a method for treating  
products such as fruits with tea leaf powder produced by freezing-drying.

However:

1) Comparison Document 1 (JP11-346702A, hereinafter referred to as D1)  
discloses a method for processing raw tea leaves, which may comprise the steps of  
30 preprocessing the raw tea leaves by washing, freezing and so on before drying the  
leaves through vacuum freeze-drying treatment. D1 also discloses milling the same

(See Claims 1-4, Paras. [0013]-[0017] on Page 3 of the Specification, and the Example portion) to obtain a tea leaf powder.

The tea leaf in D1 undergoes some pretreatment. However, the skilled in the art, based on the actual conditions (such as the conditions of the fresh tea leaf and the requirement of the final products), can make common selections of whether to carry out the pretreatment steps (such as washing and freezing) or not. The technical effects of these selections can also be predicted by the skilled in the art

10 2) Fruit juice is made of fruit, and the flavor and nutritional ingredients thereof are quite similar. Based on the disclosure of treating fruit juice with tea extract, it is easy for the skilled in the art to think of treating fruits with tea powders. In other words, treating fruit with tea powder is a common selection that can be made by the skilled in the art.

15 Therefore, based on D2 and combined with D1, it is obvious for the skilled in the art to obtain the technical solution of Claim 9 via common selections. Claim 9 possesses no inventive step under Article 22.3 of the Chinese Patent Law.

20 9. Claims 10-11 referring to Claim 9 make further definitions. However, the additional technical features of Claims 10-11 are common selections for the skilled in the art and can not bring about any unexpected technical effects (see the reasons in Remarks 2-3).

Therefore, Claims 10-11 possess no inventive step under Article 22.3 of the Chinese Patent Law.

25 10. Claims 12-13 seeks for the protection of food or drink. However, when Claims 4-7 involves no inventive step, it is obvious for the skilled in the art to think of adding the extracts or aromas into food or drink.

Therefore, Claims 12-13 possess no inventive step under Article 22.3 of the Chinese Patent Law.

30 11. Claims 14-15 seeks for the protection of a cosmetic. However, when Claims 4-7 involves no inventive step, it is obvious for the skilled in the art to think of adding

the extracts or aromas into cosmetic.

Therefore, Claims 14-15 possess no inventive step under Article 22.3 of the Chinese Patent Law.

- 5        For the above reasons, the present application cannot be granted a patent. If the applicant cannot provide sufficient reasons and strong evidences to prove the inventive step of the present application, the present application will be rejected.

**Tea extract, cake and beverage made by pulverizing tea into slurry**

**Publication number:** CN1217886 (A)

**Publication date:** 1999-06-02

**Inventor(s):** LU XINGFU [CN]

**Applicant(s):** LU XINGFU [CN]

**Classification:**

- International: A23F3/06; A23F3/14; A23F3/30; A23F3/40; A23F3/00; A23F3/06; A23F3/40; (IPC1-7): A23F3/06; A23F3/14; A23F3/30; A23F3/40

- European:

**Application number:** CN19971019778 19971109

**Priority number(s):** CN19971019778 19971109

**Abstract of CN 1217886 (A)**

A process for making tea extract, tea cake and tea beverage includes such technological steps as pulverizing tea leaves to obtain fine granular milk (1-50 microns) and the addition of edible fine natural assistant. Its products include the extracts of white tea, oolong tea, green tea, black tea and yellow tea, granular tea extract, tea cake, multi-taste tea, beverage and health-care tea. Their advantages are full dissolving, no deposition, no layering and no floating substance. It can also be mixed with milk, sugar, wine, or fruit juice.

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[19]中华人民共和国国家知识产权局

[51]Int. Cl<sup>6</sup>

A23F 3/06

A23F 3/40 A23F 3/14

A23F 3/30

## [12]发明专利申请公开说明书

[21]申请号 97119778.4

[43]公开日 1999年6月2日

[11]公开号 CN 1217886A

[22]申请日 97.11.9 [21]申请号 97119778.4

[71]申请人 鲁兴福

地址 350003 福建省福州市华林路139号

[72]发明人 鲁兴福

权利要求书3页 说明书11页 附图页数0页

[54]发明名称 茶叶粉碎成细微粉浆制做茶精、茶饼、茶饮料

### [57]摘要

本发明涉及茶叶粉碎成细微粉浆制做茶精、茶饼、茶饮料是将茶叶粉碎成细微粉浆，加入微量天然食用助剂，制成白茶、乌龙茶、绿茶、红茶、黑茶、黄茶的粉精、颗粒茶精、茶饼、多味茶、饮料茶、保健茶。茶叶粉浆粒度可细到50微米、10微米甚至1微米，上百倍地增加了茶与水的接触面。沸水冲泡时，立即溶散。不沉淀、不分层、不漂浮，水、茶浑然一体。饮用没有粉粒、粘稠感。可加入牛奶、糖、酒、果汁等同饮，适应人们不同爱好和需要。

ISSN 1 0 0 8 - 4 2 7 4

茶；或初加工黄茶快速清洗干净，其特征是：将其粉碎成细微粉浆，彻底破坏茶叶组织细胞，根本改变茶叶外型特征，鲜茶叶加工的茶浆用自然发酵、加酶发酵或化学转化发酵至黄褐色，加入天然食用造粒悬浊助剂，喷雾干燥或造粒、压片，浓缩、烘干，成为黑茶粉精、颗粒茶精或茶饼。

六、干净鲜茶叶；或干净鲜茶叶经杀青；或干净初加工黄茶；或初加工黄茶快速清洗干净，其特征是：将其粉碎成细微粉浆，彻底破坏茶叶组织细胞，根本改变茶叶外型特征，鲜茶叶加工的茶浆用自然发酵闷黄或加酶转化发酵至黄色，加入天然食用造粒悬浊助剂，用喷雾干燥或造粒、压片，浓缩、烘干，成为黄茶粉精、颗粒茶精或茶饼。

七、根据权利要求1-6所述茶细微粉浆，其特征是：加入天然食用造粒悬浊剂的同时，加入天然食用香精，喷雾干燥或造粒、压片，浓缩、烘干；或含水率3-4%的茶粉精、颗粒茶精、茶饼，用20-60%鲜花花瓣吸香、烘干，成为花茶的粉精、颗粒茶精或茶饼。

八、根据权利要求1-6所述茶浆，其特征是：加入天然食用造粒悬浊剂的同时，加入或匹配组合加入糖、奶粉、果汁、柠檬酸或其他调味剂，喷雾干燥或造粒、压片，浓缩、烘干，成为多味茶的粉精，颗粒茶精或茶饼。茶苦涩过重，加入微量碳酸氢钠中和。

九、根据权利要求1-6所述茶浆，其特征是：用水煮沸，加入天然食用悬浊剂的同时，加入柠檬酸、糖、苯甲酸纳，装瓶打入二氧化碳密封，成为茶气水。

十、根据权利要求1-6所述茶浆，其特征是：茶浆用水煮

## 说 明 书

茶叶粉碎成细微粉浆制做茶精、茶饼、茶饮料

本发明涉及茶叶粉碎成细微粉浆制做茶精、茶饼、茶饮料、保健茶。

茶叶是世界上三大饮料之一，在中国已有四千多年的历史，创造了丰富的茶技术、茶饮品和茶文化。经查九四年三月再版的《中国茶经》和同年十月再版的《食品加工技术、工艺和配方大全》及当前市场上的产品，茶的花色品种很多，但多属一泡二喝三弃渣的传统产品。近来虽然创造了速溶茶和罐装茶饮料，给人们使用很大方便，也是从茶叶提取茶水加工而成。

茶叶是茶树当年生长的鲜嫩芽叶，自古以来就有人作菜吃、当药用，其组织（即纤维组织）细胞比人们日常生活食用一般瓜、果、豆、菜的纤维组织还细嫩。有的茶叶专家也认为，丢弃茶渣是一种资源浪费，建议茶渣再利用。更不要说在生活快节奏的今天，有时第一次冲泡茶水尚未喝完，就客走茶凉了。不少保健专家认为，在人们生活水平日益提高的今天，多食纤维素，有益身体健康和防病。

本发明的目的，是将茶叶加工成细微粉浆，其细度可小至50微米、10微米甚至1微米。彻底破坏了茶的组织细胞，根本改变了茶叶的外型特性，上百倍地增加了茶与水的接触面，达到“即冲即溶”的程度。加入必要的天然助剂，制做茶精、颗粒茶精、茶饼、茶饮料、保健茶。固体茶即冲即溶，随泡随喝、不沉淀、分层、漂浮，能与牛奶、酒、糖、果汁等同饮。方便快捷，充分利用有益健康多种有效元素，适应人们生活快节奏，口味多样化的需要。

后，用喷雾干燥的办法，将其干燥至含水率至3—5%，即成白茶粉精。或用造粒机造粒，或压片机压片。造粒直径以0.8—1.2毫米为佳。压片机模型可制成各种不同的图案。如方型、条型、豆型、半球型、动物型、卡通型等。为方便实用，可制成重量为1克至250克等不同规格。烘干至含水率至3—5%，即成白茶颗粒茶精或茶砖（见实例之一）。

## 二、萎凋茶的制做。经萎凋制做的茶称绿茶。

经清洗干净没有老梗、杂物的鲜茶叶（必要时也可甩干表面水分），进行萎凋，以减少苦涩味，提高鲜爽度，散发部分水分。萎凋后进行杀青。用手工杀青或机器杀青的办法，将萎凋叶杀均杀透杀适度。不能因温度过低而产生红梗叶，也不能因温度过高而产生烟焦味。彻底破坏酶的活性。用粉碎设备进行粗碎、超细粉碎，成为细微茶浆，浓缩干燥至含水率20—30%；或将清洗干净的鲜茶叶，用粉碎设备将其粗碎、超细粉碎，成为细微茶浆。鲜茶叶粉碎细浆，需加入适量多酚氧化酶、过氧氢酶、过氧化物酶，在30度温度保温与未发酵茶液混合发酵，弥补萎凋不足。用括板式热交换器或管道式热交换器进行100—110度高温杀青，彻底破坏酶的活性。避免产生黄熟、红熟现象，浓缩干燥至含水度至20—30%；或经手选、机选干净的初加工绿茶，进行粗碎、超细粉碎，成为细微茶粉。加入20—30%水混均，成为茶浆；或用饮用水快速清洗初加工的绿茶，用粉碎设备进行粗碎、超细粉碎，成为细微茶浆。鲜叶粉碎的茶浆，含水率高，要用浓缩干燥的办法，将其含水率降至20—30%。将溶解好的造粒悬浊剂，加入上述茶浆中混合均匀。也可将造粒悬浊剂液加到经粗碎的茶浆中，再进行细微粉碎。用

#### 四、中度发酵茶的制作。中度发酵茶称红茶。

清洗干净没有老梗、杂物的鲜茶叶（必要时用甩干器械甩干表面水分），进行自然萎凋或机器萎凋。萎凋后，用粉碎设备进行粗碎、超细粉碎，成为细微茶浆。倒入底部通气的搅拌机进行通气搅拌发酵。待茶浆由绿变黄绿，由黄绿变黄红色，有苹果香，青草味消失为度。立即用高温杀酶并浓缩，使其含水率至20—30%；或经清洗干净的鲜茶叶，用粉碎设备将其粗碎、超细粉碎，倒入底部通气的搅拌机进行通气发酵。茶浆由绿变黄绿、由黄绿变黄红色、有苹果香味为度。也可通过酚氧化酶、过氧化氢酶、过氧化物酶的转化和高锰酸钾、过氧化氢、氧气等氧化，达到改善茶香形成茶红素。立即用高温杀酶的办法，进行杀酶烘干，使其含水率至20—30%。或经手选、机选干净的经初加工的红茶，用粉碎设备进行粗碎，再将粗碎茶或红碎茶进行超细粉碎，成为细微茶粉，加入20—30%水搅均，成为茶浆；或用水快速清洗干净初加工的红茶，用粉碎设备将其粗碎、超细粉碎，成为细微茶浆。将溶解好的造粒悬浊剂加入到茶浆中搅拌均匀。或将溶解的造粒悬浊剂直接加入到粗碎茶浆中进行超细粉碎混合。喷雾干燥至含水率3—5%，即成红茶粉精，或用造粒机造粒，压片机进行压片，烘干至含水率至3—5%，即成红茶颗粒茶精或茶饼（见实例四）。

#### 五、重度发酵茶制作。重复发酵茶称黑茶。

经清洗干净没有老梗、杂物的鲜茶叶，用手工或机器杀青，叶色由绿变暗绿，青气基本消失为度。用粉碎设备进行粗碎、超细粉碎。倒进搅拌机进行搅拌通气发酵，温度控制在30—40度，湿度控制在80—85度，茶浆由暗绿变黄褐，酒槽气浓烈为

加工的黄茶，用粉碎设备进行粗碎、超细粉碎，成为细微茶浆。加入溶解好的造粒悬浊剂混合均匀，也可直接将造粒悬浊剂，加入到粗碎茶浆中，再超细粉碎混合。用喷雾干燥机干燥至含水率至3—5%，即成黄茶粉精，或用造粒机造粒，或压片机压片，烘干至含水率至3—5%，即成黄茶颗粒茶精或饼茶（见实例六）。

#### 七、花香茶的制做。花香茶也称花茶。

粉碎成细微粉浆的白茶、绿茶、乌龙茶、红茶、黑茶及黄茶茶浆，浓缩到含水率至20—30%时，分别加入造粒悬浊剂的同时，根据茶香匹配的需要和人们口味的爱好，再加入0.5—1%的天然食用香精，进一步丰富和突出茶的香味。如桂花、茉莉花、珠兰花、白兰花、玫瑰花、香草香等香精，搅拌均匀，喷雾干燥成为花茶粉精，或经造粒、压片、烘干，成为花茶颗粒茶精或饼茶。

也可将造粒悬浊剂分别加到白茶、绿茶、乌龙茶、红茶、黑茶茶浆中制成粉精、颗粒茶精或饼茶时，使其含水率达3—4%，再分别用10—60%的桂花、茉莉花、珠兰花、玫瑰花、玳瑰花等混合窨香，并适时察看堆中温度，以免因堆温过高而影响花香吸收或产生异味，吸香后茶含水量增加，再用80—100度温度烘至含水率至3—5%，成为花茶的茶精、颗粒茶精或饼茶（见实例七）。

#### 八、多味茶的制做。

由于生活水平不断提高，人们交际、应酬、待客中有不同要求。为了丰富饮茶口味，可制成多味茶。白茶、绿茶、红茶、黑茶、黄茶在喷雾干燥造粒、压片前，分别或搭配加入柠檬汁、

30%，加入用温水溶解好的1%淀粉糊精，混合均匀，使其既能造粒又不粘筛为宜，用1毫米孔造粒机造粒。烘干至含水率至3—5%，成为白茶颗粒茶精。

实例二：鲜茶叶清洗干净，用离心机或甩干机甩干表面水份，用传统手工机器杀青，防止因温度过低出现红梗叶，温度过高产生烟焦味，用机器粉碎成80目茶浆，再用均质机进行匀质破碎成1—10微米的细浆，浓缩、烘干至含水率至20—30%，加入造粒悬浊剂，混合均匀，也可以均质前将造粒悬浊剂加入茶浆再均质混合。用压片机压片，烘干至含水率至3—5%，成为绿茶茶浆。

实例三：用冷水快速清洗经初加工的乌龙茶，用切茶机切成了厘米以内茶碎，用CWF粉碎机粉碎成150—400目粉浆，用加温真空干燥浓缩的办法，使其含水率降至20—30%。加入溶解好的1%造粒悬浊剂果胶，用喷雾干燥机干燥至含水率至3—5%，即成乌龙茶粉精。

实例四、经清洗后的鲜茶叶，用切茶机切成了毫米以内茶碎，用磨盘机磨成10—50微粒的细浆，倒入搅拌机，进行通气搅拌。通气办法有两种：一种是将普通搅拌机进行改造，从底部多处打小孔安装通气管，由外部压缩空气进气管，由搅拌机底部向上通气。二是在搅拌机上中部用压缩机通气管向下茶浆吹气。控温控湿定量。经过通气搅拌使茶浆均匀发酵。茶浆由绿变黄绿，由黄绿变黄红，有苹果香味为度。立即用高温杀酶，以免发酵过度。浓缩、烘干至含水率至20—30%。加入已溶解好的1%黄杆菌胶造粒悬浊剂，搅拌均匀，用压片机压片，片状可是圆、方、球、半球、长条等。烘干至含水率3—5%，即

加入 15% 白糖溶液、0.2% 柠檬酸、1% 悬浊剂、0.1-0.5% 增香剂及微量的苯甲酸纳，混合均匀，装瓶，打入二氧化碳、密封，成为茶气水。

实例十、将 80% 绿茶超细茶浆同 20% 红茶超细茶浆混合均匀，加入 1% 造粒悬浊助剂虫胶溶液，混合均匀，喷雾干燥或造粒、压片、烘干，成为浓郁的茶精、颗粒茶精或茶饼。

实例十一、将人参或鳖的提取液加入溶解好的 10% 白糖、0.1% 悬浊剂果胶、微量苯甲酸纳溶液中，再同超细粉白茶、乌龙茶、绿茶、红茶、黄茶沸水混合均匀，装瓶密封，成为人参茶鳖茶的营养保健饮料。